

U.S. Patent Application Serial No. 10/517,765
Response to OA dated February 5, 2008

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A substrate treating apparatus comprising a processing chamber for processing at least one substrate, a substrate support member for supporting said at least one substrate, a prechamber for storing said substrate support member, and a control device for regulating [[the]] at pressure to lower than atmospheric pressure during loading of said substrate support member supporting said at least one substrate from said prechamber into said processing chamber, wherein said substrate support member contains a support section, formed as a protrusion on the substrate support member and arranged to contact to be contacted said substrate, and a receiving section installed below said support section and extending outwards from a section of the outer periphery of said support section.

Claim 2 (Original): A substrate treating apparatus according to claim 1, wherein said control device regulates the pressure during said loading so that the pressure is lower than atmospheric pressure, and higher than the pressure when once raising a vacuum within said prechamber prior to said loading.

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Claim 3 (Original): A substrate treating apparatus according to claim 1, wherein said control device regulates the pressure during said loading so that the pressure is lower than atmospheric pressure, and higher than the pressure during substrate processing.

Claim 4 (Original): A substrate treating apparatus according to claim 1, wherein said control device regulates the pressure during said loading so that the pressure is between 200 Pa and 3000 Pa.

Claim 5 (Currently Amended): A substrate treating apparatus comprising a processing chamber for processing at least one substrate, a substrate support member for supporting said at least one substrate in said processing chamber, a heater for heating said at least one substrate in said processing chamber, and depositing a thin film on said at least one substrate by CVD method, wherein said substrate support member contains a support section, formed as a protrusion on the substrate support member and arranged to contact to be contacted said at least one substrate, and a receiving section formed below said support section and extending outwards from a section of the outer periphery of said support section, and said receiving section catches the particles generated on said support section.

Claim 6 (Original): A substrate treating apparatus according to claim 5 comprising a control member to regulate the processing temperature to 800° C. or less.

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Claim 7 (Original): A substrate treating apparatus according to claim 5 comprising a control member to regulate the processing temperature between 400° C. and 800° C.

Claim 8 (Original): A substrate treating apparatus according to claim 5, wherein said thin film is a silicon film or a silicon nitride film.

Claim 9 (Currently Amended): A substrate treating apparatus comprising a processing chamber for processing at least one substrate, and a substrate support member for supporting said at least one substrate in said processing chamber, wherein said substrate support member contains a support section, formed as a protrusion on the substrate support member and arranged to contact to be contacted said substrate, and a receiving section formed below said support section and extending outwards from a section of the outer periphery of said support section, and said receiving section extends between 6 mm and 15 mm from a section of the outer periphery of said support section.

Claim 10 (Currently Amended): A substrate treating apparatus comprising a processing chamber for processing at least one substrate, and a substrate support member for supporting said at least one substrate in said processing chamber, wherein said substrate support member contains a main section, and a support section, formed as a protrusion on the substrate support member and arranged to contact to be contacted said substrate, and a receiving section formed below said support

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section and extending outwards from a section of the outer periphery of said support section, and said main section, said support section, and said receiving section are integrated into one piece.

Claim 11 (Currently Amended): A manufacturing method for a semiconductor device, said method comprising the steps of:

supporting at least one substrate in a substrate support member containing a support section, formed as a protrusion on the substrate support member and arranged to contact to be contacted said substrate, and a receiving section formed below said support section and extending outwards from a section of the outer periphery of said support section;

loading said substrate support member supporting said at least one substrate at a pressure lower than atmospheric pressure from a prechamber into [[said]] a processing chamber;

processing said substrate supported by said substrate support member in said processing chamber; and

unloading said substrate support member supporting said substrate from said processing chamber.

Claim 12 (Original): A manufacturing method for a semiconductor device according to claim 11, wherein the pressure in said loading step is higher than the pressure when once raising a vacuum in the prechamber prior to said loading, and is lower than the atmospheric pressure.

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Claim 13 (Original): A manufacturing method for a semiconductor device according to claim 11, wherein the pressure in said loading step is higher than the pressure during said substrate processing and is lower than the atmospheric pressure.

Claim 14 (Original): A manufacturing method for a semiconductor device according to claim 11, wherein the pressure in said loading step is between 200 Pa and 3000 Pa.

Claim 15 (Currently Amended): A manufacturing method for a semiconductor device, said method comprising the steps of:

loading at least one substrate into a processing chamber;

supporting said at least one substrate by a substrate support member made up of a support section, formed as a protrusion on the substrate support member and arranged to contact to be contacted said substrate, and a receiving section formed below said support section and extending outwards from a section of the outer periphery of said support section for catching particles generated in said support section;

depositing a thin film by CVD method on said at least one substrate supported by said substrate support member in said processing chamber; and

unloading said substrate from said processing chamber.

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Claim 16 (Original): A manufacturing method for a semiconductor device according to claim 15, wherein the temperature in said depositing step is 800° C. or less.

Claim 17 (Original): A manufacturing method for a semiconductor device according to claim 15, wherein the temperature in said depositing step is between 400° C. and 800° C.

Claim 18 (Original): A manufacturing method for a semiconductor device according to claim 15, wherein said thin film deposited on said substrate in said depositing step is a silicon film or a silicon nitride film.